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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application Number: 10/676,903
Confirmation Number: 8076
Applicant: Vanita Mani et al.
Filed: October 1, 2003
Group Art Unit: 1792
Examiner: Patel, Rita Ramesh
Docket Number: 123860-1

For: INTEGRAL LAUNDRY CLEANING AND DRYING SYSTEM AND METHOD

REPLY BRIEF PURSUANT TO 37 C.F.R. §§ 41.41

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Oct 12 th , 2008	/Patrick K. Patnode/ Patrick K. Patnode

This Reply Brief is being filed in response to the Examiner's Answer mailed on August 13, 2009.

Remarks begin on page 2 of this paper.

REMARKS

This Reply Brief is being filed in response to the Examiner's Answer mailed on August 13, 2009. This Reply Brief addresses the Examiner's misunderstanding of the technology, as well as the Examiner's continuing pattern of misapplying the teachings of the prior art beyond its reasonable limits in order to reach the subject matter taught and claimed by Appellants. In the interest of brevity in this Reply Brief, Appellants respectfully ask that the Board carefully consider the arguments set forth in the previously-filed Appeal Brief. Accordingly, Appellants respectfully request full and favorable consideration by the Board, as Appellants strongly believe that claims 1, 3-5, 7-9, 11-12, 14, 70, 74, and 86 are currently in condition for allowance.

The Renzacci reference is missing features recited by independent claim 1.

The Examiner rejected claims 1, 3-5, 7-9, 11-12, 14, 70, 74, and 86 under 35 U.S.C. § 102(b) as being anticipated by Renzacci. Appellants respectfully traverse this rejection.

Anticipation under section 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 778 F.2d 775, 227 U.S.P.Q. 773 (Fed. Cir. 1985). For a prior art reference to anticipate under section 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). To maintain a proper rejection under section 102, a single reference must teach each and every limitation of the rejected claim. *Atlas Powder v. E.I. du Pont*, 750 F.2d 1569 (Fed. Cir. 1984). Accordingly, Applicants need only point to a single element not found in the cited reference to demonstrate that the cited reference fails to anticipate the claimed subject matter. The prior art reference also must show the *identical* invention "*in as complete detail as contained in the ... claim*" to support a *prima facie* case of anticipation. *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989).

Turning to the claims, the present independent claim 1 recites, *inter alia*, "a *drying mechanism* pneumatically coupled to the laundry enclosure via an air inlet and an air outlet, *comprising: a vapor compression cycle system* comprising a condenser, an evaporator, and a compressor disposed in a closed fluid path, wherein the *condenser is configured to heat air upstream of the air inlet*, and wherein the *evaporator is configured to cool air downstream of the air outlet*."

The Renzacci reference does not disclose the foregoing claim features, e.g., both a condenser and an evaporator of a vapor compression cycle system configured to heat air and cool air, respectively. In the Final Office Action, the Examiner appears to interpret the condenser 26 as the claimed condenser and the cooling unit 7 as the claimed evaporator. See Final Office Action, pages 2-3. The Examiner stated: "per the Renzacci reference the condenser 26 is a condenser and thus reads on claims wherein a condenser is configured to heat; the cooling unit 7 performs cooling functions and thus reads on claims wherein an evaporator is configured to cool." Final Office Action, pages 2-3 (emphasis added). Further, the Examiner reiterated the same statements about 'evaporator', 'condenser', 'vapor compression cycle system' and 'closed fluid path' on page 7 (paragraphs 2, 3) and page 8 (paragraph 1) of the Examiner's Answer. As discussed below, these claim features are clearly missing from the Renzacci reference.

Appellants submit that the Examiner does not fully understand the elements recited in the present claims. Although Appellants do not intend or suggest that the specification should be read into the present claims, Appellants submit that the specification may be used as a reference to better understand the claimed subject matter. In particular, Appellants stress that the Renzacci reference, and the Examiner's rejection, both fail to address the *vapor compression cycle system as recited in claim 1*. In the Final Office Action, the Examiner cites elements that are not identical to the claimed subject matter.

Further, Appellants performed a word search of the Renzacci reference, and found absolutely no instances of the terms evaporator and evaporate anywhere in the text. The Examiner also stated "Renzacci teaches a heat exchanger 15 is installed in the drying air circuit downstream from preheating unit 19 (supplemental heating device) and cooling unit 7 (cooling device)." Final Office Action, page 3. The Examiner did not specifically address the "vapor compression cycle system" and the "closed fluid path" as recited in claim 1. Furthermore, the Examiner did not specifically address "the condenser is configured to heat air" and "the evaporator is configured to cool air" as recited in claim 1. As discussed below, any reasonable reading of the Renzacci reference cannot support a prima facie case of anticipation of the present claims.

First, the Examiner seems to have equated an 'evaporator' with a cooling unit 7 of Renzacci. The Appellants respectfully differ with this understanding of the terms 'evaporator'. The Appellants respectfully restate that the scientific meaning of 'evaporator' is different from the common English meaning of a cooling unit. The meaning of 'evaporator', as would be

understood by one of ordinary skill in the art, *is a device that produces cooling or refrigeration in a vapor compression cycle as a constant pressure reversible process*. In other words, an evaporator, by common scientific knowledge *is a heat sink that operates as part of a constant pressure reversible process and that facilitates removal of heat from the surroundings by virtue of temperature difference to a refrigerant stored in the evaporator*. Accordingly, the Appellants respectfully state that Renzacci reference cannot support a prima facie case of anticipation of the evaporator element and request reconsideration and allowance of all pending claims.

Second, the Appellants respectfully point out that Examiner seems to have connected the structure and function of two unrelated scientific entities: 'evaporator' and 'cooling unit'. The Appellants point out that each of the two terms 'evaporator' and 'cooling unit' may meaningfully exist and operate in any thermodynamic cycle without the other. Moreover, the definition of one has nothing to do with the definition of the other. In other words, there are evaporators that may not be related to any cooling unit and similarly there are cooling units, which do not need a evaporator for its action to take place. Therefore, the statement in page 7, lines 20-21 of the Examiner's answer that "Appellant fails to claim specific structural requirements of the evaporator which exclude cooling coils from reading on the claims" is misleading and scientifically unacceptable.

Third, Appellants stress that the Renzacci reference fails to disclose, inter alia, "a vapor compression cycle system comprising a condenser, an evaporator, and a compressor disposed in a closed fluid path, wherein the condenser is configured to heat air upstream of the air inlet; and wherein the evaporator is configured to cool air downstream of the air outlet," as recited by independent claim 1. As noted above, Appellants performed a word search of the Renzacci reference, and found absolutely no instances of the terms evaporator and evaporate anywhere in the text. In the Final Office Action, the Examiner equated the cooling unit 7 with the claimed evaporator, yet the Renzacci reference does not support this reading of the cooling unit 7. The Renzacci reference merely discloses that the cooling unit 7 cools the air, yet it does not disclose an evaporator as the cooling unit 7. See Renzacci, col. 1, lines 58-60. For at least these reasons, among others, the Renzacci reference cannot anticipate independent claim 1 and its dependent claims.

Fourth, for sake of hypothetical argument, if the condenser 26 is interpreted as the claimed condenser and if the cooling unit 7 is interpreted as the claimed evaporator as suggested by the Examiner, then the Renzacci reference fails to disclose these elements 7 and 26 *as part of a vapor compression cycle system and a closed fluid path*. As illustrated in FIG. 1,

the Renzacci reference illustrates the cooling unit 7 as part of the drying air circulation system 4, whereas the condenser 26 is part of the solvent distillation system. The cooling unit 7 is simply not connected to a closed fluid path with the condenser 26. In fact, the cooling unit 7 is not even disclosed as an evaporator, as suggested by the Examiner. As illustrated in FIG. 1 and disclosed by the Renzacci reference, the cooling unit 7 is not part of the solvent distillation system and, thus, cannot possibly be interpreted as *part of a vapor compression cycle system*. Furthermore, the condenser 26 of the Renzacci reference is completely isolated from the drying air circulation system 4, such that it cannot possibly be interpreted to heat air upstream from the air inlet, as recited by claim 1. For at least these reasons, among others, the statement in page 8, lines 1-2 of the Examiner's answer that "Moreover, the condenser 26 (condenser) and cooling unit 7 (evaporator) are disposed in a loop formed between the air inlet and outlet of the washing machine" is misleading and scientifically unacceptable. Therefore, Renzacci reference cannot anticipate independent claim 1 and its dependent claims.

In summary, despite various hypothetical interpretations of the Renzacci reference, the features recited above are clearly missing. Again, the Renzacci reference fails to disclose "a drying mechanism pneumatically coupled to the laundry enclosure via an air inlet and an air outlet, comprising: a vapor compression cycle system comprising a condenser, an evaporator, and a compressor disposed in a closed fluid path, wherein the condenser is configured to heat air upstream of the air inlet; and wherein the evaporator is configured to cool air downstream of the air outlet."

Renzacci cannot support a *prima facie* case of obviousness of an airflow control to enable both a closed airflow system and an open airflow system as set forth in dependent claim 71.

The Examiner rejected claims 13, 15, 71, and 75-79 under 35 U.S.C. § 103(a) as being unpatentable over Renzacci. Appellants respectfully traverse these rejections. As discussed above, the Renzacci fails to teach or suggest or disclose various features recited by independent claim 1. Claims 13, 15, 71, and 75-79 depend from independent claim 1, and are believed to be allowable for at least the same reasons as discussed above with reference to claim 1. According, Appellants respectfully request withdrawal of the foregoing rejections under Section 103.

The Applicants respectfully states that the burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (PTO Bd.

App. 1979). In addressing obviousness determinations under 35 U.S.C. § 103, the Supreme Court in *KSR International Co. v. Teleflex Inc.*, No. 04-1350 (April 30, 2007), reaffirmed many of its precedents relating to obviousness including its holding in *Graham v. John Deere Co.*, 383 U.S. 1 (1966). In *KSR*, the Court also reaffirmed that "a patent composed of several elements is not proved obvious merely by demonstrating that each of its elements was, independently, known in the prior art." *Id.* at 14. In this regard, the *KSR* court stated that "it can be important to identify a reason that would have prompted a person of ordinary skill in the relevant field to combine the elements in the way the claimed new invention does ... because inventions in most, if not all, instances rely upon building blocks long since uncovered, and claimed discoveries almost of necessity will be combinations of what, in some sense, is already known." *Id.* at 14-15. In *KSR*, the court noted that the demonstration of a teaching, suggestion, or motivation to combine provides a "helpful insight" in determining whether claimed subject matter is obvious. *KSR, slip op.* at 14.

In the present case, the Examiner's rejections under 35 U.S.C. § 103 are deficient at least because the cited references, either alone or in hypothetical combination, fail to teach, suggest or disclose each and every element recited in the Applicants' claims. As discussed in more details in the Appeal Brief filed on dependent claim 71 recites "an airflow control configured to change the drying mechanism between a closed airflow system and an open airflow system relative to the atmosphere." These claim features are clearly missing from the Renzacci reference. In the Final Office Action, the Examiner did not present any reasoning behind the rejection of dependent claim 71. See Final Office Action, pages 4-5. As a result, the Examiner did not make a *prima facie* case of obviousness of dependent claim 71.

Renzacci cannot support a prima facie case of obviousness of the claimed ranges as set forth in dependent claims 75-79.

Dependent claim 75 recites "control parameters having a target heated-air temperature greater than about 100 degrees Fahrenheit for the condenser." Dependent claim 76 recites "control parameters having a target heated-air temperature between approximately 130 and 170 degrees Fahrenheit for the condenser." Dependent claim 77 recites "control parameters having a target cooled-air temperature less than about 70 degrees Fahrenheit for the evaporator." Dependent claim 78 recites "control parameters having a target cooled-air temperature between approximately 50 and 80 degrees Fahrenheit for the evaporator." Dependent claim 79 recites "control parameters having a target airflow rate of about 150 to 300 cubic feet per minute through the laundry enclosure."

The Renzacci reference does not teach or suggest or disclose any of the claimed ranges set forth above. In the Final Office Action, the Examiner did not cite any numbers whatsoever, much less a range that could support a *prima facie* case of obviousness of the foregoing dependent claims. See Final Office Action, pages 4-5. In view of the foregoing passages, among others, Appellants stress that the Examiner has not made a *prima facie* case of obviousness of dependent claims 75-79, because the Examiner has not cited to any numbers whatsoever, much less a range that overlaps the claimed ranges. In view of this deficiency, among others, Appellants respectfully request withdrawal of the foregoing rejection of dependent claims 75-79.

Renzacci and Berndt, taken alone or in hypothetical combination, cannot support a *prima facie* case of obviousness of the controls as set forth in dependent claims 72 and 73.

The Examiner also rejected claims 6, 72, and 73 under 35 U.S.C. § 103(a) as being unpatentable over Renzacci as applied to claims above, and further in view of Berndt. Appellants respectfully traverse these rejections. As discussed above, the Renzacci fails to teach or suggest or disclose various features recited by independent claim 1. Claims 6, 72, and 73 depend from independent claim 1, and are believed to be allowable for at least the same reasons as discussed above with reference to claim 1. The Berndt reference does not obviate the deficiencies of the Renzacci reference. As a result, the cited references, taken alone or in hypothetical combination with one another, fail to teach or suggest or disclose the features recited in the present claims. According, Appellants respectfully request withdrawal of the foregoing rejections under Section 103.

Dependent claim 72 recites "a wash control comprising a *plurality of different cleaning fluid selections* including a cleaning solvent, a cleaning detergent, and water." Dependent claim 73 recites "a *fluid recovery control* configured to *enable and disable fluid recovery* of a cleaning fluid." Appellants stress that the cited references both fail to teach or suggest or disclose these claim features. In the Final Office Action, the Examiner merely stated that "[l]aundry machines are commonly known in the art to have cleaning fluid sources to clean items therein as desired; commonly known cleaning fluids are water, cleaning solvents, detergents, fabric softeners, etc." Final Office Action, page 6. Although Appellants do not necessarily agree with the Examiner's position regarding "well known" features, Appellants stress that the Examiner's rejection does not even address the recitations set forth in the claims. Furthermore, even if different cleaning fluids mutually exclusively exist in different laundry machines, it does not necessarily follow that

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any one particular machine would provide "a *wash control* comprising a *plurality of* different cleaning *fluid selections* including a *cleaning solvent*, a *cleaning detergent*, and *water*," as recited by dependent claim 72. Likewise, even if different laundry machines mutually exclusively use either a fluid recovery system or no fluid recover system, it does not necessarily follow that any one particular machine would provide "a *fluid recovery control* configured to *enable and disable fluid recovery* of a cleaning fluid," as recited by dependent claim 73. According, Appellants respectfully request withdrawal of the foregoing rejections under Section 103.

Summary

For the reasons set out above, Applicant respectfully submits that the application is in condition for allowance. Favorable reconsideration and allowance of the application are, therefore, respectfully requested.

If the Examiner believes that anything further is necessary to place the application in better condition for allowance, the Examiner is kindly asked to contact Applicant's undersigned representative at the telephone number below.

Respectfully submitted,

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